an inflow tube terminating in the inflow container,

an outflow tube beginning in the outflow container,

a flow generator, and

filters arranged in the inflow and/or outflow container or in the inflow and outflow pipes, respectively, and having the liquid flowing therethrough,

wherein the inflow and outflow pipes extend in opposite ends of the flow chamber and the outflow tube begins in the outflow container.

2. An arrangement according to claim 1, wherein the size and the number of the filter pores is set to be varying across the overall filter area such that a pressure differential between the inflow/outflow pipes arranged at different distances from the inflow/outflow tube, which causes non-uniform flow through said pipes, is compensated by different overall pore areas associated with the individual pipes.

3. An arrangement according to claim 1, for electro-depositing or electro-removing material on or from the surface of the sample, comprising an electrode in the flow chamber, wherein the liquid is an electrolyte and wherein the sample and the electrode are connected to a pulsating or constant current source.

4. An arrangement according to claim 3, for electro-depositing or electro-removing material on or from the surface of the sample, wherein

the flow chamber has two planar confining walls arranged parallel to the direction of flow and having a first and a second recess, respectively,

the sample has a substantially planar surface having said axis of rotation arranged perpendicularly thereto,

the sample covers the first recess and said planar surface defines a plane with the associated confining wall, and

the electrode covers the second recess with a planar surface and defines a plane with the associated confining wall.

5. An arrangement according to claim 4, wherein the electrode has a grid basket of electrochemically inert material that is filled with the material to be deposited in granular form and has a planar surface containing holes.

6. An arrangement according to claim 4, wherein the electrode consists of a metal body having a planar surface and coated with platinum or another noble metal.

7. An arrangement according to claim 1, wherein the inflow and/or outflow tube extends via a throttle valve into a supply container filled with liquid, said supply container having means for filtering as well as for regulating the temperature, the pH value, the filling level and optionally also the ion concentration of the liquid.

8. The use of the arrangement according to claim 5, for depositing a layer of a nickel/iron alloy on a silicon or ceramic wafer, the alloy composition and the intrinsic mechanical stress of the layer being homogeneous across the wafer.

9. The use of the arrangement according to claim 5, for applying electrophoretic photoresist to a wafer.

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10. The use of the arrangement according to claim 1, for electroless deposition of material on the surface of the sample.

11. The use of the arrangement according to claim 1, for removing material from the surface of the sample, with the liquid used being an etching solution.

12. An arrangement enabling a liquid to flow evenly around a surface of a sample, said arrangement comprising a flow chamber profiled for allowing liquid to flow therethrough, a rotary drive mechanism having a sample mounting surface profiled relative to said flow chamber whereby a sample can be located at least in part in said flow chamber and rotatable about an axis of rotation by said rotary drive mechanism, an inflow manifold and an out flow manifold positioned on opposite ends of said flow chamber, each manifold having flow tubes extending from said respective manifold and into said flow chamber, said manifolds and said flow tubes defining a laminar flow pattern through said flow chamber.

13. The arrangement of claim 12, further comprising filters arranged in the inflow and/or outflow container or in the inflow and outflow pipes, respectively, and having the liquid flowing therethrough.

14. An arrangement according to claim 12, wherein the size and the number of the filter pores is set to be varying across the overall filter area such that a pressure differential between the inflow/outflow pipes arranged at different distances from the inflow/outflow tube, which causes non-uniform flow through said pipes, is compensated by different overall pore areas associated with the individual pipes.

15. An arrangement according to claim 12 for electro-depositing or electro-removing material on or from the surface of the sample, comprising an electrode in the flow chamber, wherein the liquid is an electrolyte and wherein the sample and the electrode are connected to a pulsating or constant current source.

16. An arrangement according to claim 12 for electro-depositing or electro-removing material on or from the surface of the sample, wherein

- the flow chamber has two planar confining walls arranged parallel to the direction of flow and having a first and a second recess, respectively,

- the sample has a substantially planar surface having said axis of rotation arranged perpendicularly thereto,

- the sample covers the first recess and said planar surface defines a plane with the associated confining wall, and

- the electrode covers the second recess with a planar surface and defines a plane with the associated confining wall.

17. An arrangement according to claim 12, wherein the electrode has a grid basket of electrochemically inert material that is filled with the material to be deposited in granular form and has a planar surface containing holes.

18. An arrangement according to claim 12, wherein the electrode consists of a metal body having a planar surface and coated with platinum or another noble metal.